



Ambulance services in Wales, 2016-17

28 June 2017
SFR 71/2017

Following an initial trial, a new clinical response model for the ambulance service in Wales was implemented in February 2017. Under the new model, only the most serious calls, categorised as red (immediately life-threatening), have a response time target. All other calls receive an appropriate response, either face-to-face or telephone assessment, based on clinical need.

In 2016-17, **76.3%** of emergency responses to red calls

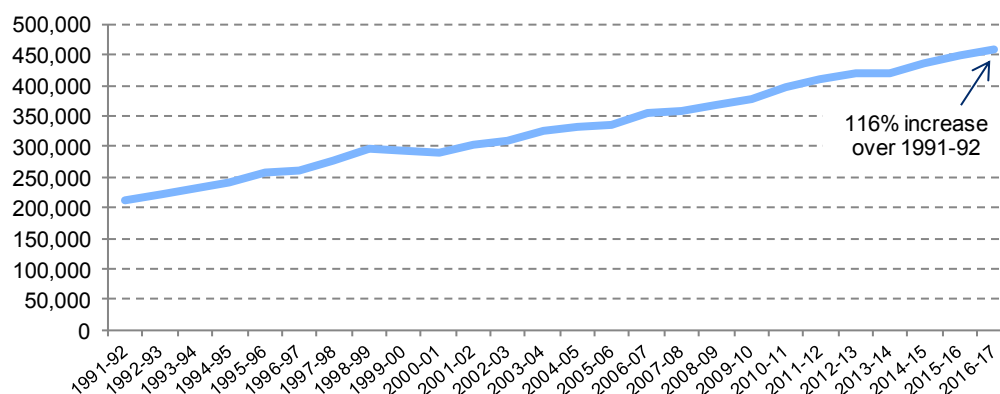


arrived at the scene within 8 minutes

Key points in 2016-17:

- 459,225 emergency ambulance calls were made during 2016-17, 2.1% up on the previous year, and 116% more than in 1991-92;
- 20,511 were red (immediately life-threatening) calls, 4.5% of the total;
- Almost a quarter of the red calls were within the Betsi Cadwaladr LHB area, with fewer than 5% in Powys;
- 76.3% of red calls received a response within 8 minutes;
- Performance ranged from 68.5% in Powys to 83.0% in Cardiff & Vale;
- The median response time for red calls was 4 minutes and 55 seconds;
- The median response time for amber calls was 13 minutes and 40 seconds.

Chart 1, total emergency calls, 1991-92 onwards



NOTE: Different call classifications over the years but combined to show on as comparable a basis as possible:

- ♦ Emergency calls and GP urgent patient journeys from 1991-92 to 1998-99
- ♦ Category A, Category B and GP urgent journeys from 1999-2000 until November 2011
- ♦ Category A, Category C and Category C (HCP) from December 2011 until September 2015
- ♦ red, amber and green calls from October 2015 to date

About this release

This statistical release looks back at 2016-17, and covers call volumes for red, amber and green categories, response times against the red target, and median response times for both red and amber calls.

Monthly data is published as part of the [NHS Activity and Performance](#) statistics release.

The Emergency Ambulance Services Committee also publishes [Ambulance Quality Indicators](#) each quarter.

Data is shown for Wales and at Local Health Board level.

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SUMMARY OF THE YEAR (2016-17)

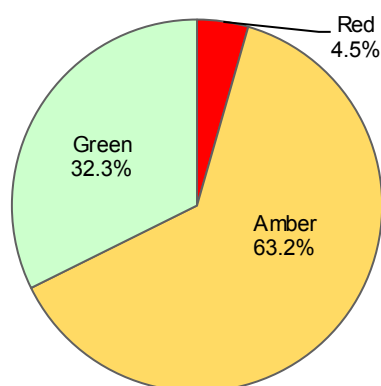
Under the new model, calls are classified as follows:

Red: Immediately life-threatening (someone is in imminent danger of death, such as a cardiac arrest). The Wales target is for 65% of emergency responses to arrive within 8 minutes.

Amber: Serious but not immediately life-threatening (patients who will need treatment to be delivered on the scene and may then need to be taken to hospital)

Green: Non urgent (can often be managed by other health services) and clinical telephone assessment.

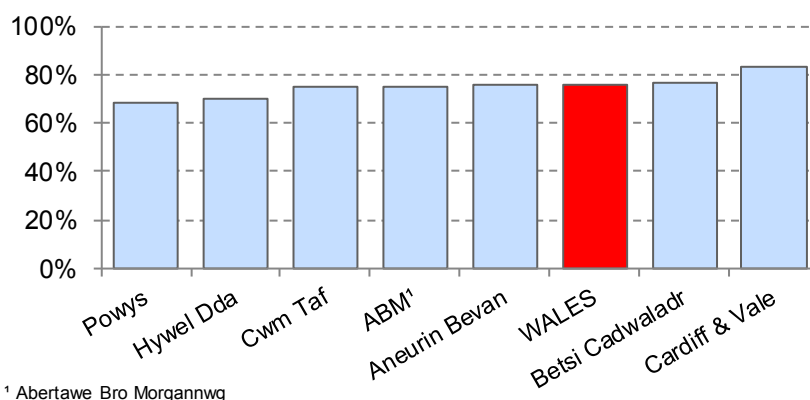
Chart 2: Emergency calls, 2016-17



WALES

459,225 emergency calls were received during the year; 20,511 (4.5%) were red, 290,348 (63.2%) were amber, and 148,366 (32.3%) were green.

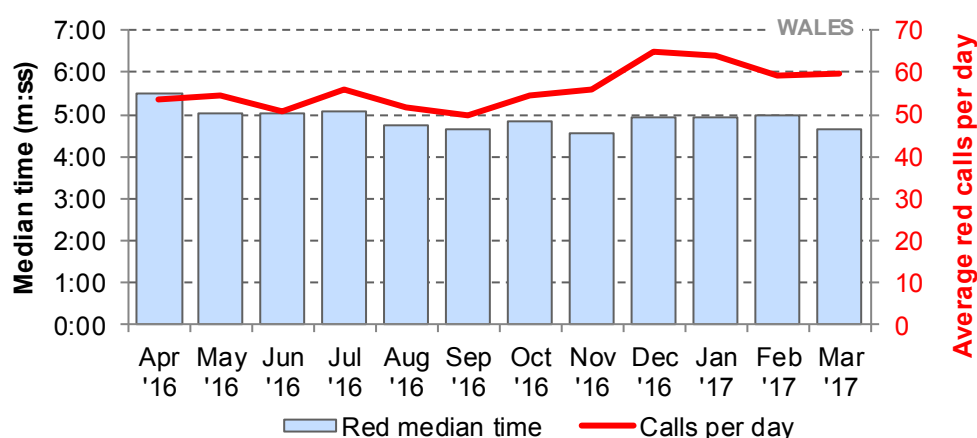
Chart 3: % of red calls which received an emergency response at the scene within 8 minutes, 2016-17



* Abertawe Bro Morgannwg

- Across Wales, more than 76% of red calls received a response within 8 minutes, well above the 65% target;
- Performance in the LHB areas ranged from 68.5% in Powys to 83.0% in Cardiff & Vale.

Chart 4: Median response times, and average red calls per day, Wales



The median response time to red calls varied each month, ranging from 4 minutes and 34 seconds (November 2016) to 5 minutes and 30 seconds (April 2016). It was under 5 minutes for every month after July 2016.

- As can be seen from Chart 4, the higher number of calls doesn't necessarily impact on the median time.
- December 2016 had the highest average daily red calls (65) yet the median time was under 5 minutes (4:55), while September 2016 had the lowest average daily red calls (50) but the median time was 4:38, slightly up on the best time (4:34 in November 2016).

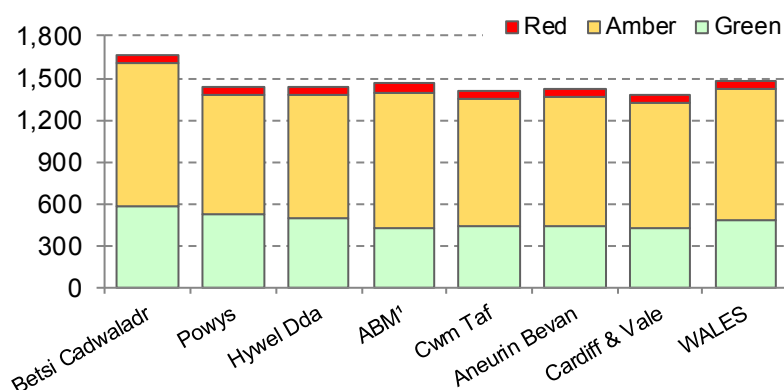
EMERGENCY CALLS

Table 1: Calls by type, average calls per day and calls per 10,000 population

LHB	Number of calls				Average calls per day				Calls per 10,000 population			
	Red	Amber	Green	TOTAL	Red	Amber	Green	Total	Red	Amber	Green	Total
Betsi Cadwaladr	4,673	70,999	40,250	115,922	13	195	110	318	67	1,022	580	1,669
Powys	738	11,362	6,999	19,099	2	31	19	52	56	857	528	1,440
Hywel Dda	2,291	33,872	19,073	55,236	6	93	52	151	60	884	498	1,441
ABM ¹	3,896	50,452	22,725	77,073	11	138	62	211	74	960	432	1,467
Cwm Taf	1,858	26,959	13,121	41,938	5	74	36	115	63	909	442	1,413
Aneurin Bevan	3,657	53,310	25,760	82,727	10	146	71	227	63	916	443	1,422
Cardiff & Vale	3,398	43,394	20,438	67,230	9	119	56	184	70	895	422	1,387
WALES	20,511	290,348	148,366	459,225	56	795	406	1,258	66	937	479	1,482

¹ Abertawe e Bro Morgannwg

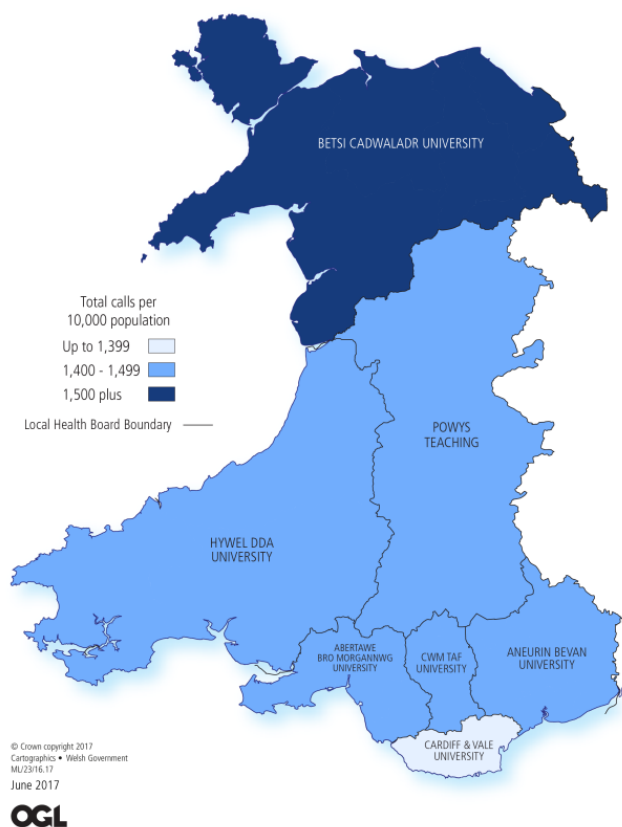
Chart 5: Red, amber and green calls, per 10,000 population, 2016-17



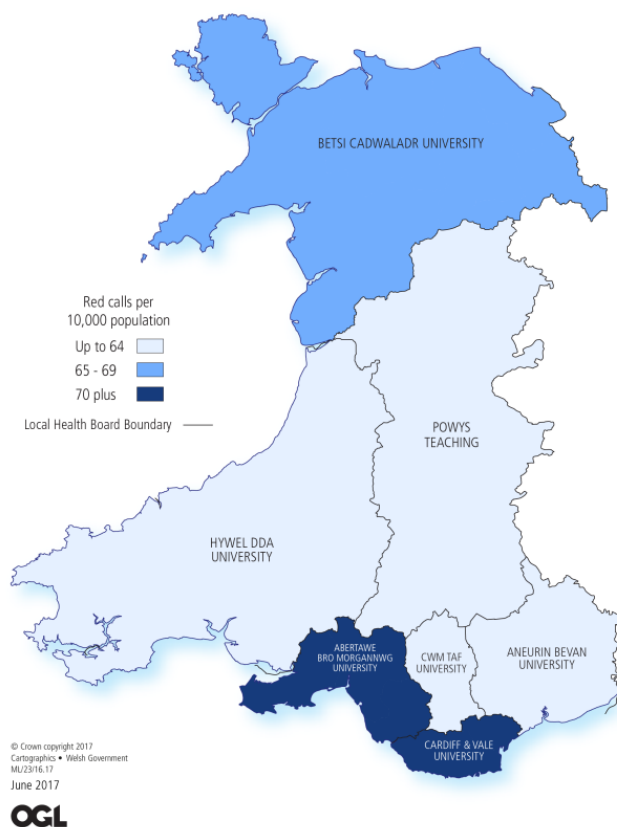
- Chart 5, and maps 1 to 4 overleaf, look at the calls made across the country, per 10,000 population.
- Almost 1,500 emergency calls were received during the year for every 10,000 residents; this varied from 1,387 in Cardiff & Vale to 1,669 in Betsi Cadwaladr (Map 1).
- 66 red calls were received for every 10,000 residents, ranging from 56 in Powys to 74 in Abertawe Bro Morgannwg (Map 2).
- 937 amber calls were received for every 10,000 residents, ranging from 857 in Powys to 1,022 in Betsi Cadwaladr (Map 3).
- 479 green calls were received for every 10,000 residents, ranging from 422 in Cardiff & Vale to 580 in Betsi Cadwaladr (Map 4).

Note that this is the resident population of the LHB where the incident occurred. All areas include some calls to attend accidents or illnesses from non-Welsh residents.

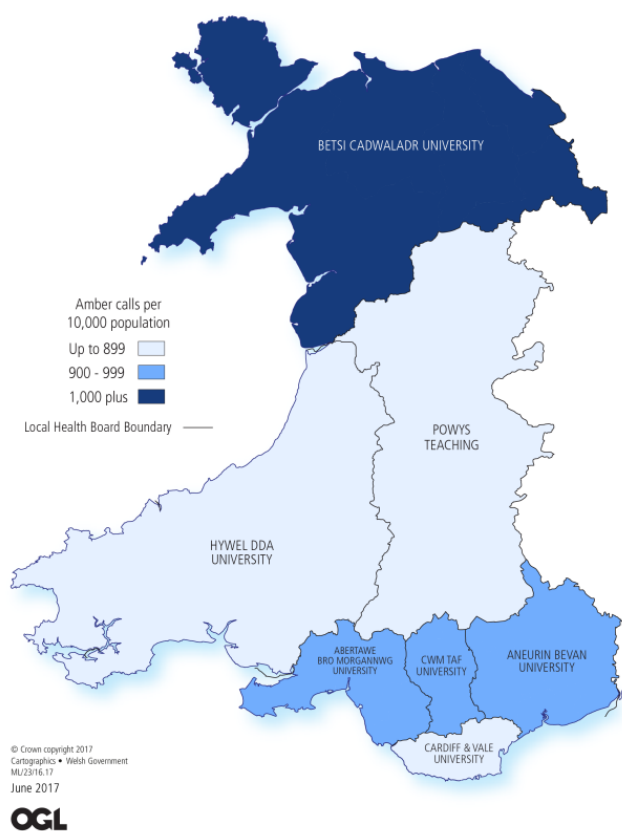
Map 1: Total calls per 10,000 population



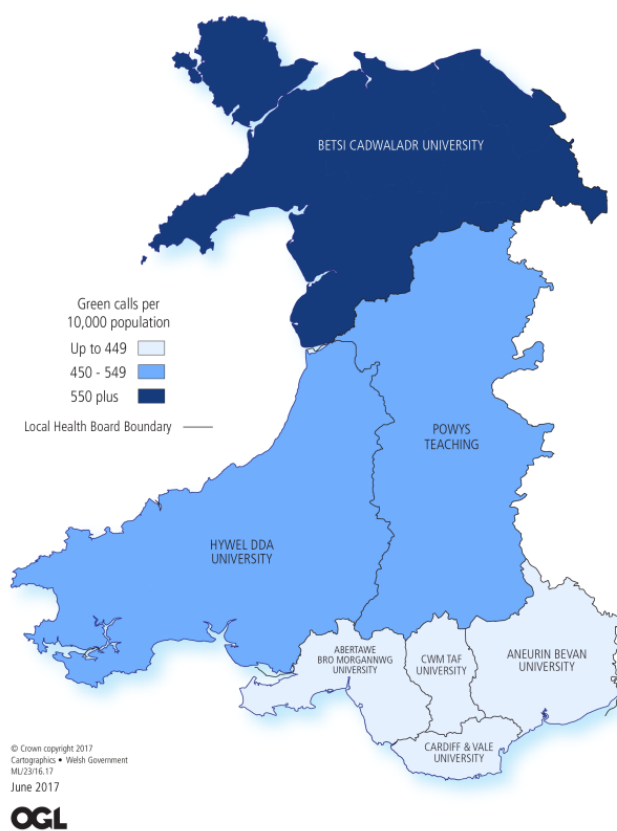
Map 2: Red calls per 10,000 population



Map 3: Amber calls per 10,000 population



Map 4: Green calls per 10,000 population



NOTE: because of the number of calls, the maps have different scales – see legends

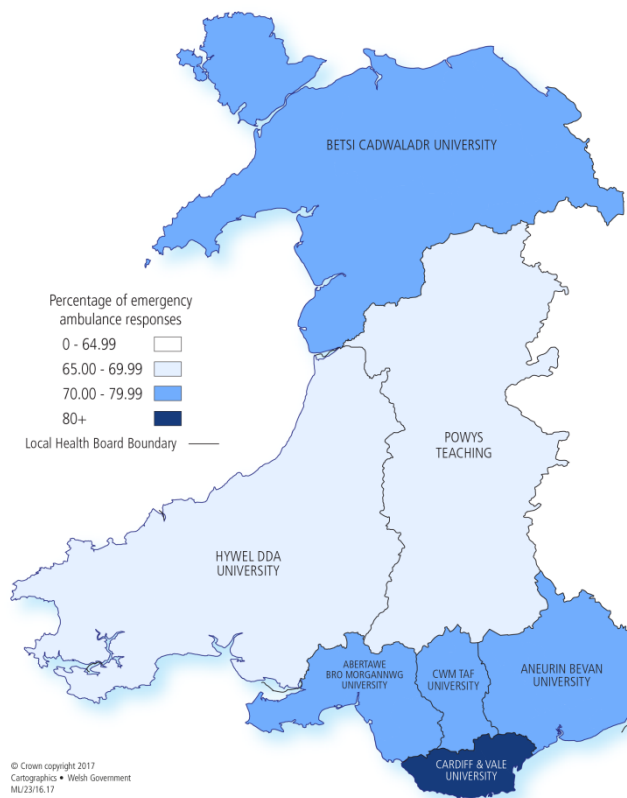
RED CALLS, EMERGENCY RESPONSES AND MEDIAN RESPONSE TIMES

Table 2: Red calls and emergency responses, 2016-17

LHB	Red calls	ER at scene	ER at scene within 8 minutes	% within 8 mins
Betsi Cadwaladr	4,673	4,616	3,557	77.1%
Powys	738	731	501	68.5%
Hywel Dda	2,291	2,272	1,586	69.8%
ABM ¹	3,896	3,855	2,906	75.4%
Cwm Taf	1,858	1,839	1,384	75.3%
Aneurin Bevan	3,657	3,618	2,761	76.3%
Cardiff & Vale	3,398	3,355	2,786	83.0%
WALES	20,511	20,286	15,481	76.3%

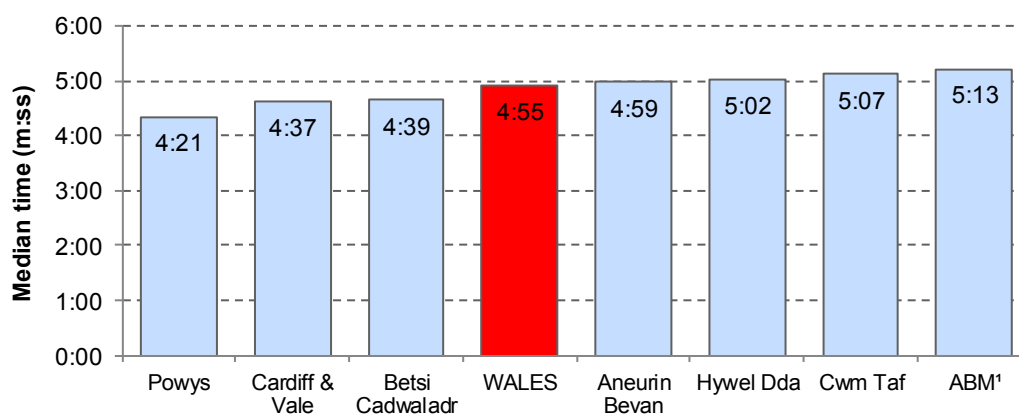
- 20,511 red calls were received during 2016-17, an average of 56 a day.
- More than 1 in 5 of the calls received (23%) were in the Betsi Cadwaladr LHB area, while only 4% were in Powys.

Map 5: Emergency responses to red calls arriving within 8 minutes, 2016-17



OGL

Chart 6: Median response times – red calls, 2016-17

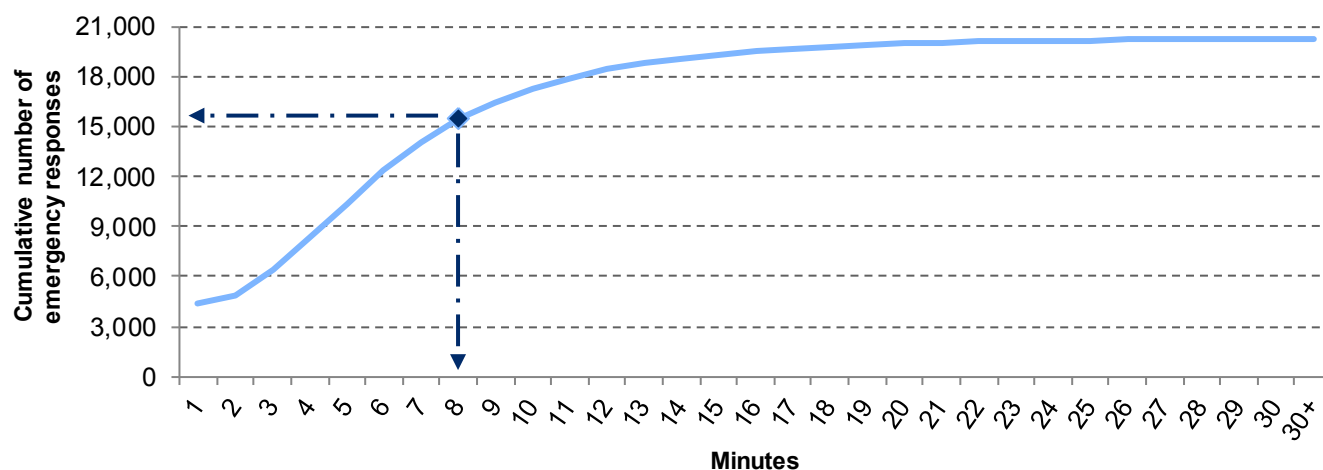


¹ Abertawe Bro Morgannwg

The median response time for red calls during the year was 4 minutes and 55 seconds, ranging from 4:21 in Powys to 5:13 in Abertawe Bro Morgannwg.

Table 3: Emergency responses to red calls, by time band, 2016-17

Area	Number of responses at scene	Percentage of responses at the scene within											
		4 mins	5 mins	6 mins	7 mins	8 mins	9 mins	10 mins	11 mins	12 mins	15 mins	20 mins	30 mins
Betsi Cadwaladr	4,616	43.5	53.0	62.9	70.9	77.1	81.5	85.1	88.1	90.6	94.7	98.4	99.9
Powys	731	48.0	54.4	59.4	63.7	68.5	71.0	73.9	77.7	81.0	87.3	94.3	98.5
Hywel Dda	2,272	40.9	49.8	58.0	64.5	69.8	73.8	78.5	81.3	84.4	91.0	96.4	99.3
ABM ¹	3,855	37.6	47.6	58.8	67.5	75.4	82.0	86.7	89.2	91.4	96.2	98.9	99.8
Cwm Taf	1,839	37.5	49.0	58.8	68.0	75.3	80.6	84.3	87.5	90.0	96.0	99.3	100.0
Aneurin Bevan	3,618	39.9	50.2	60.6	68.8	76.3	81.5	86.2	89.3	91.8	96.4	99.2	100.0
Cardiff & Vale	3,355	43.6	54.2	65.2	74.8	83.0	87.6	91.2	93.9	95.4	97.8	99.4	99.9
WALES	20,286	41.1	51.0	61.0	69.3	76.3	81.3	85.4	88.3	90.7	95.2	98.5	99.8

Chart 7: Cumulative number of emergency responses to red calls arriving at the scene, 2016-17

- 15,481 red calls (76.3%) received an emergency response within 8 minutes;
- Of the 20,286 red calls where an emergency response arrived at the scene, just over 40% arrived within 4 minutes, just over half within 5 minutes, more than 85% within 10 minutes and 99.8% within 30 minutes;
- Across the LHBs, more than 70% arrived within 8 minutes in all areas except Hywel Dda and Powys

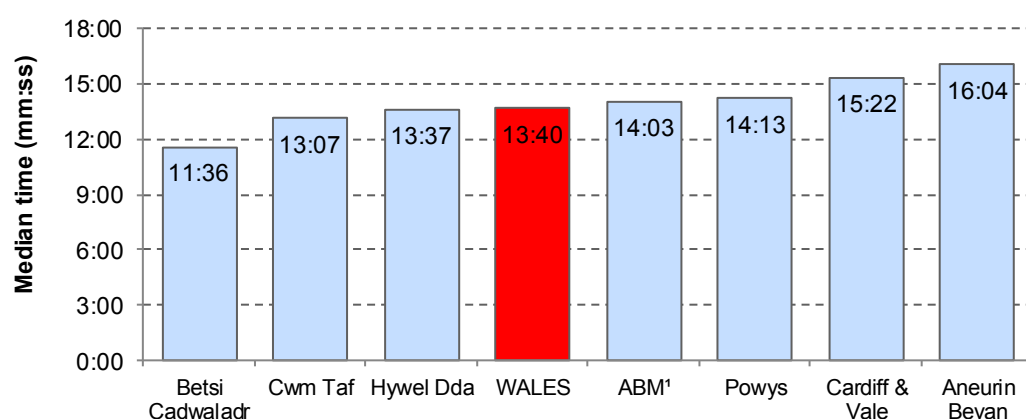
AMBER CALLS, EMERGENCY RESPONSES AND MEDIAN RESPONSE TIMES

Table 4: Emergency responses to amber calls, by time band, 2016-17

Area	Number of responses at scene	Percentage of responses at the scene within						
		5 mins	10 mins	15 mins	20 mins	25 mins	30 mins	30+ mins
Betsi Cadwaladr	66,804	15.5	43.2	61.4	73.3	81.0	86.0	14.0
Powys	10,740	19.7	37.6	52.2	65.1	73.9	80.3	19.7
Hywel Dda	31,530	15.2	37.6	54.3	67.5	76.4	82.3	17.7
ABM ¹	44,241	9.9	34.1	52.8	64.4	71.8	76.5	23.5
Cwm Taf	24,922	13.0	37.7	55.9	68.1	76.0	81.2	18.8
Aneurin Bevan	48,406	10.6	31.4	47.2	58.8	67.1	72.5	27.5
Cardiff & Vale	37,716	10.1	33.1	49.1	59.1	66.2	71.5	28.5
WALES	264,359	12.8	36.6	53.9	65.6	73.5	78.7	21.3

Of the 264,359 amber calls where an emergency response arrived at the scene, more than 50% arrived within 15 minutes, and nearly 80% in half an hour.

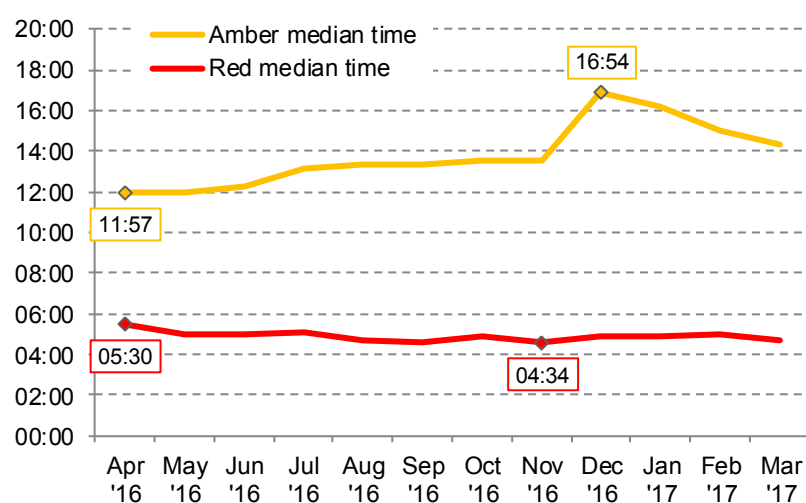
Chart 8: Median response time – amber calls, 2016-17



¹ Abertawe Bro Morgannwg

The median response time for amber calls during the year was 13 minutes and 40 seconds, ranging from 11:36 in Betsi Cadwaladr to 16:04 in Aneurin Bevan

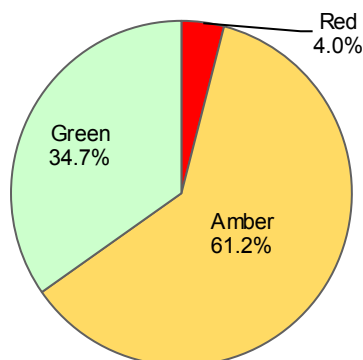
Chart 9: Median response times, red and amber, by month, 2016-17



While the median response time for red calls has remained within 30 seconds or so of the average over the year, the median response time for amber calls has varied much more, ranging from 11 minutes and 57 seconds in April 2016 to 16:54 in December 2016 with a much clearer peak in times in the winter.

LOCAL HEALTH BOARD PROFILE – BETSI CADWALADR

Chart 10a: Red, amber and green calls, 2016-17



Betsi Cadwaladr

Chart 11a: Percentage of emergency responses at the scene within 8 minutes

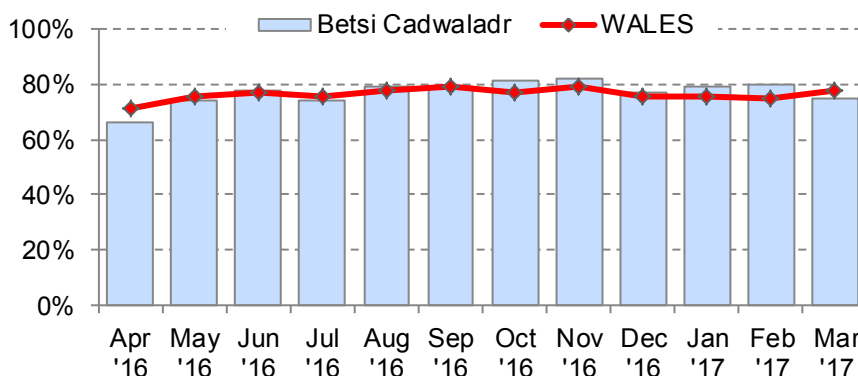


Chart 12a: Percent of emergency responses to red calls arriving at the scene, by minute

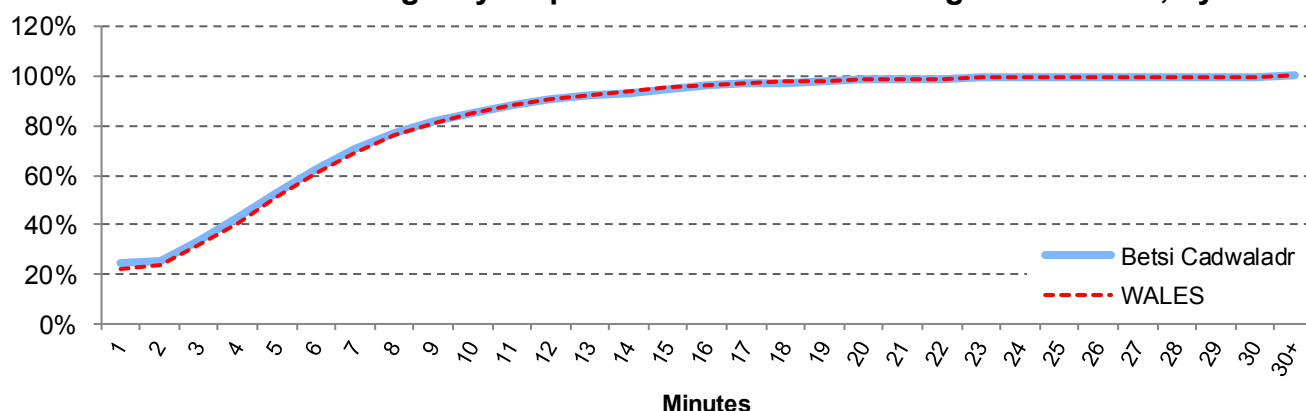


Chart 13a: Median response time – red calls

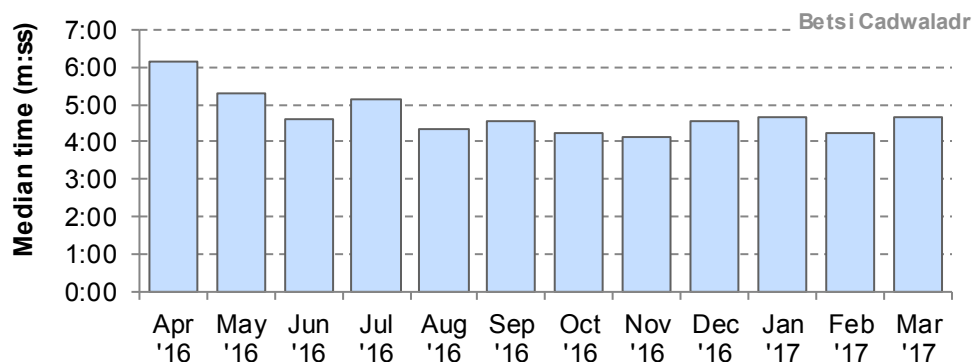
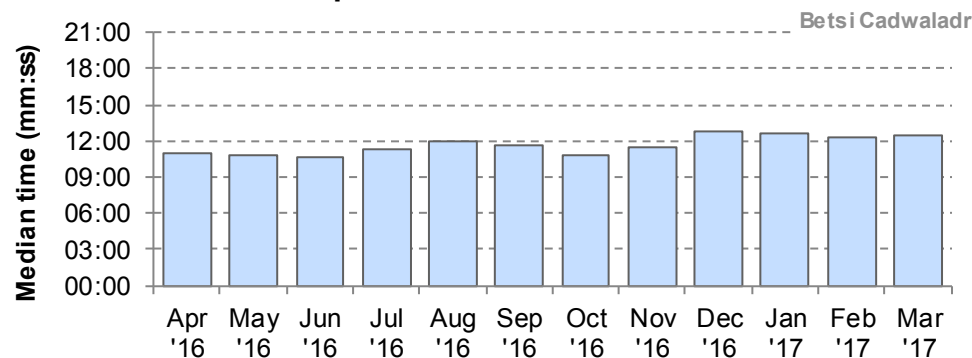
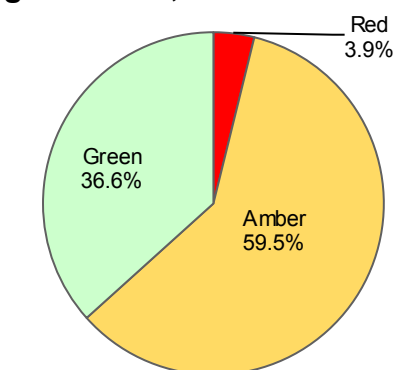


Chart 14a: Median response time – amber calls



LOCAL HEALTH BOARD PROFILE – POWYS

Chart 10b: Red, amber and green calls, 2016-17



Powys

Chart 11b: Percentage of emergency responses at the scene within 8 minutes

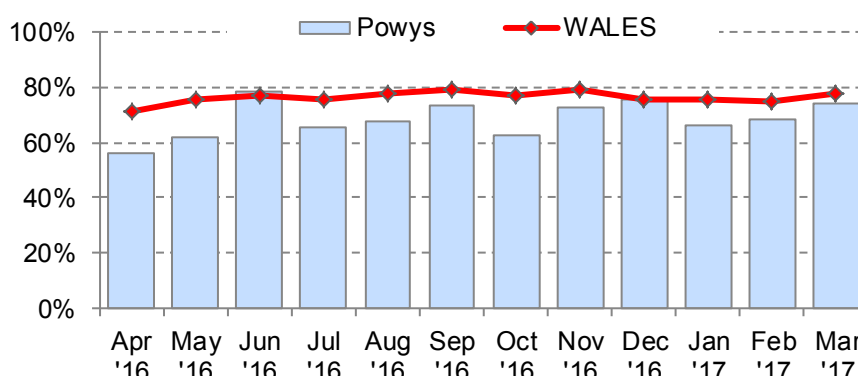


Chart 12b: Percent of emergency responses to red calls arriving at the scene, by minute

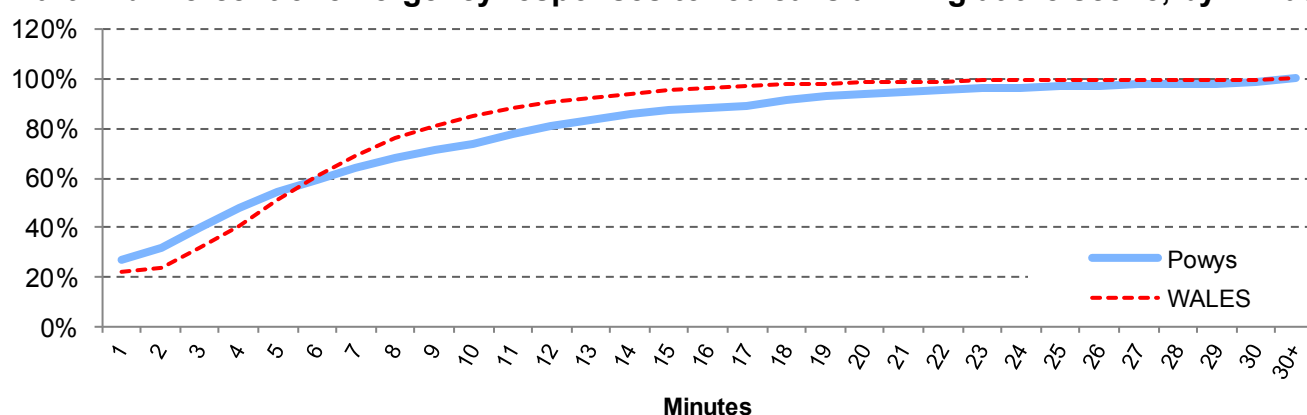


Chart 13b: Median response time – red calls

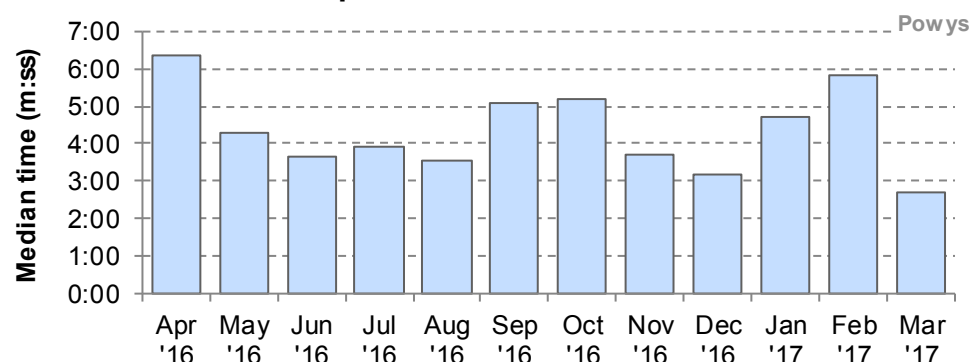
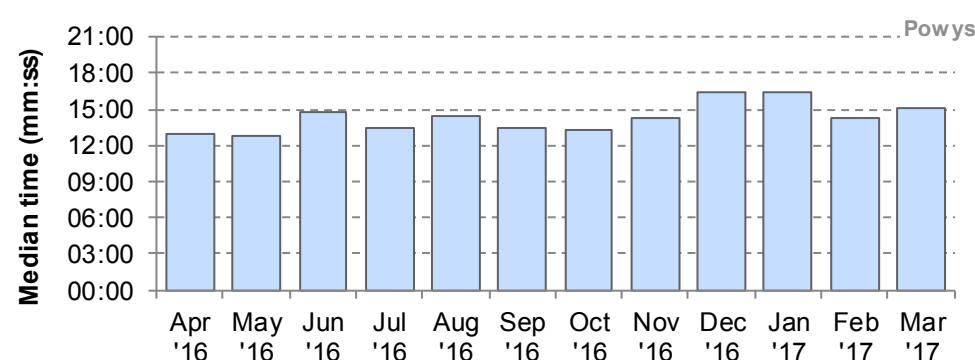
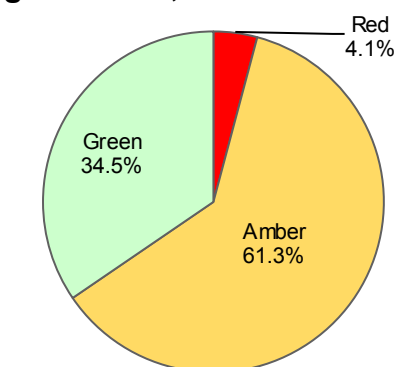


Chart 14b: Median response time – amber calls



LOCAL HEALTH BOARD PROFILE – HYWEL DDA

Chart 10c: Red, amber and green calls, 2016-17



Hywel Dda

Chart 11c: Percentage of emergency responses at the scene within 8 minutes

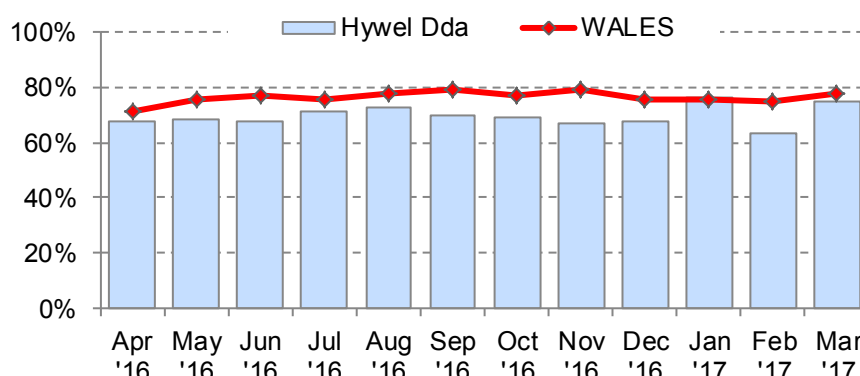


Chart 12c: Percent of emergency responses to red calls arriving at the scene, by minute

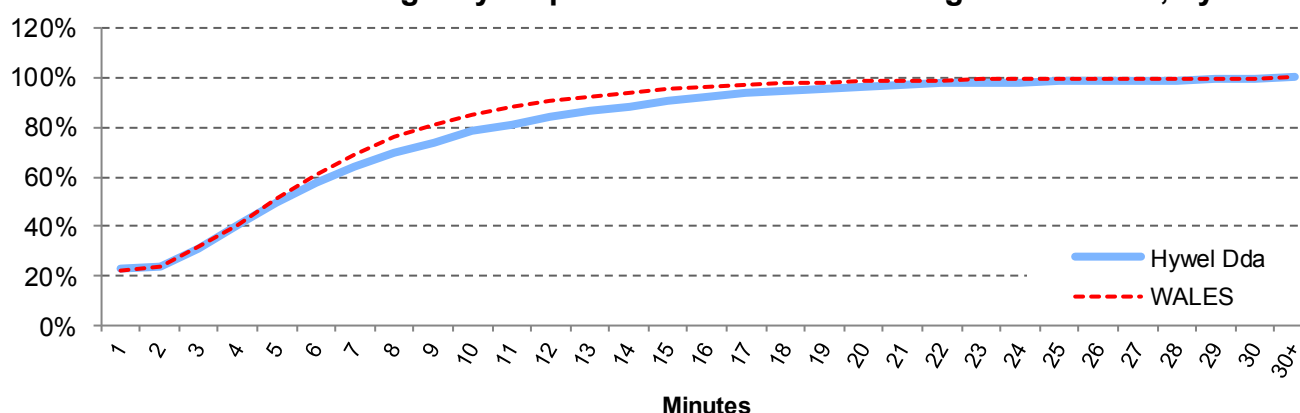


Chart 13c: Median response time – red calls

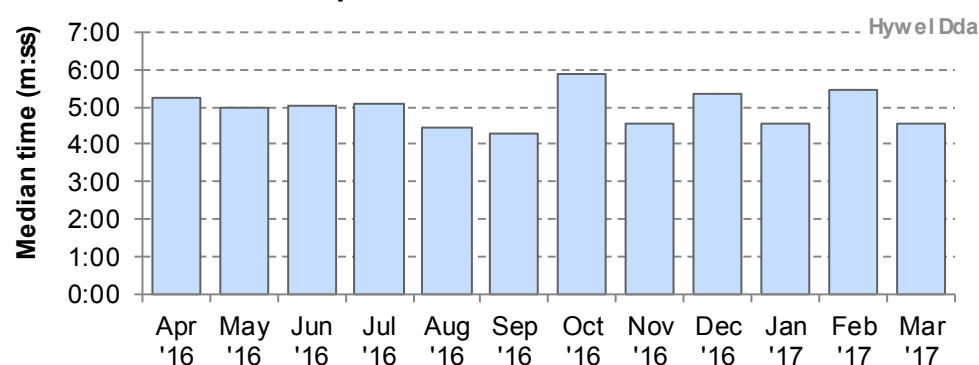
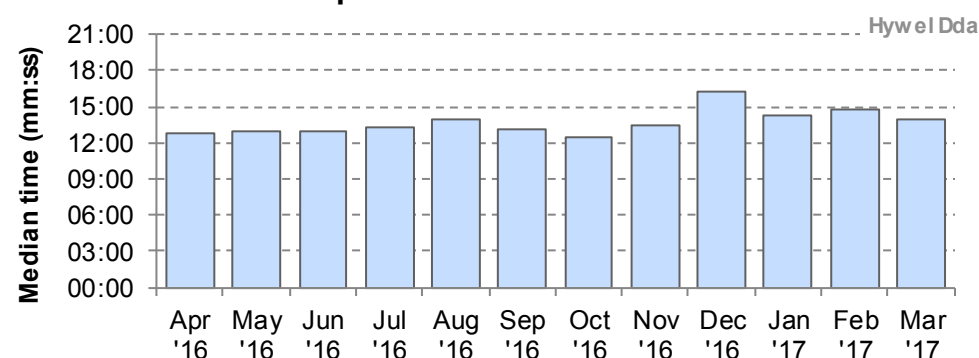
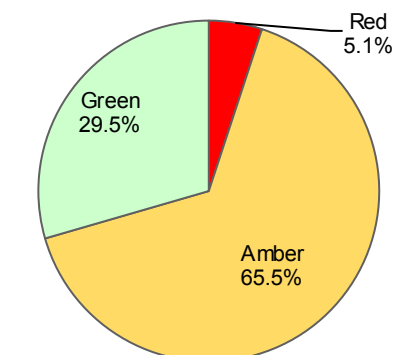


Chart 14c: Median response time – amber calls



LOCAL HEALTH BOARD PROFILE – ABERTAWE BRO MORGANNWG

Chart 10d: Red, amber and green calls, 2016-17



Abertawe Bro Morgannwg

Chart 11d: Percentage of emergency responses at the scene within 8 minutes

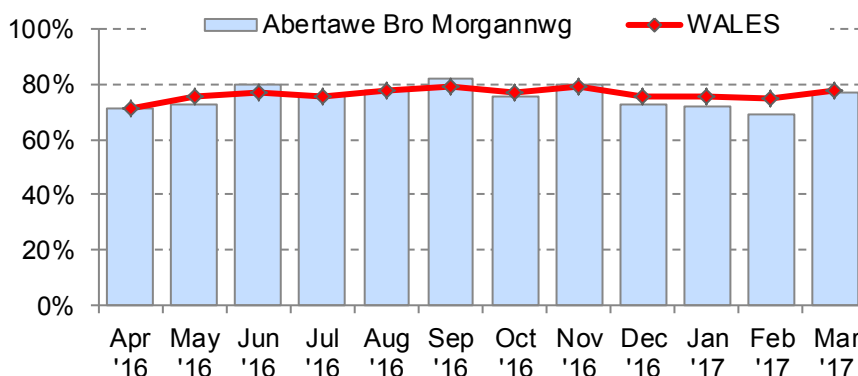


Chart 12d: Percent of emergency responses to red calls arriving at the scene, by minute

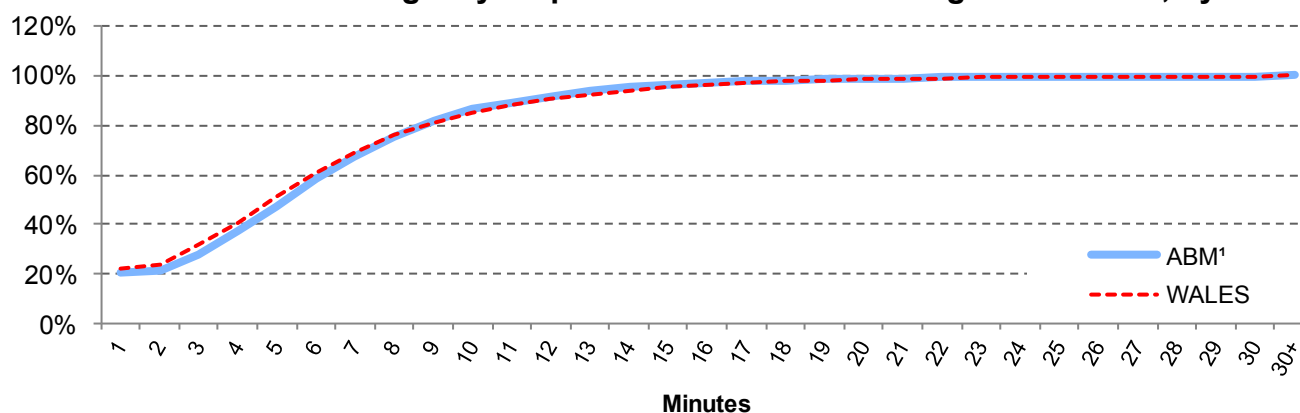
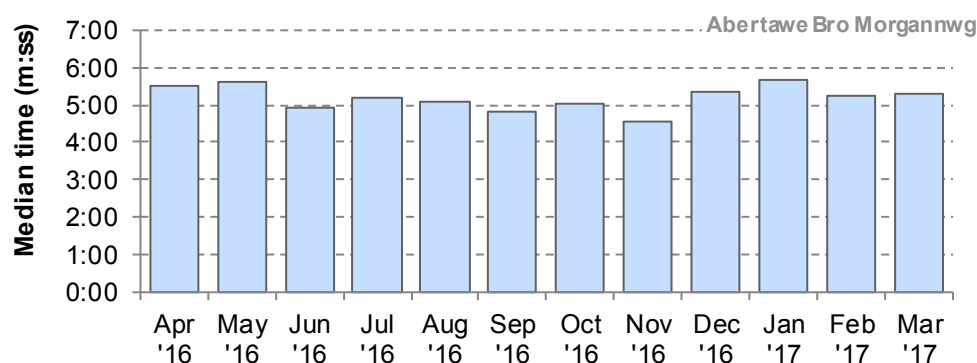
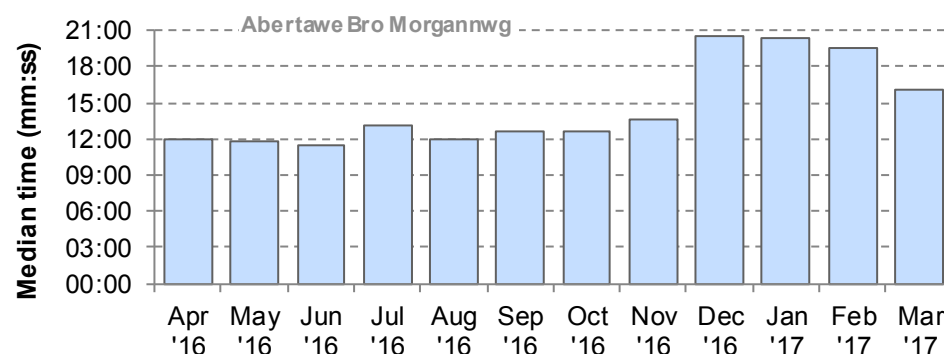


Chart 13d: Median response time – red calls



Abertawe Bro Morgannwg
2016-17

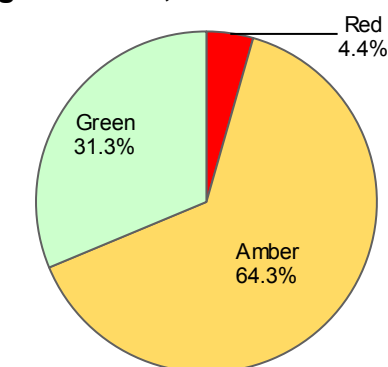
Chart 14d: Median response time – amber calls



Abertawe Bro Morgannwg
2016-17

LOCAL HEALTH BOARD PROFILE – CWM TAF

Chart 10e: Red, amber and green calls, 2016-17



Cwm Taf

Chart 11e: Percentage of emergency responses at the scene within 8 minutes

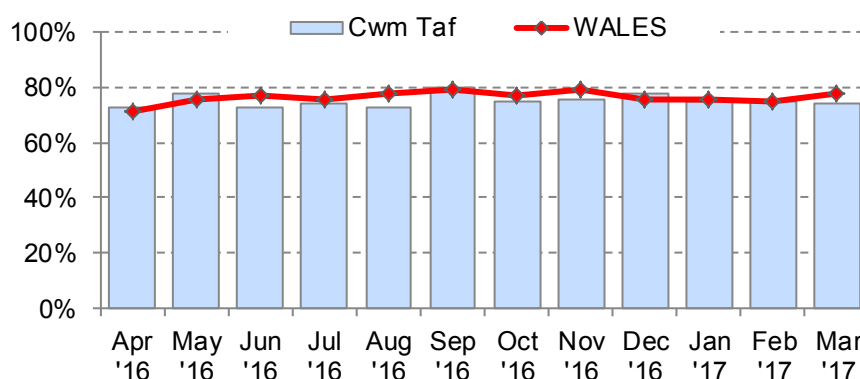


Chart 12e: Percent of emergency responses to red calls arriving at the scene, by minute

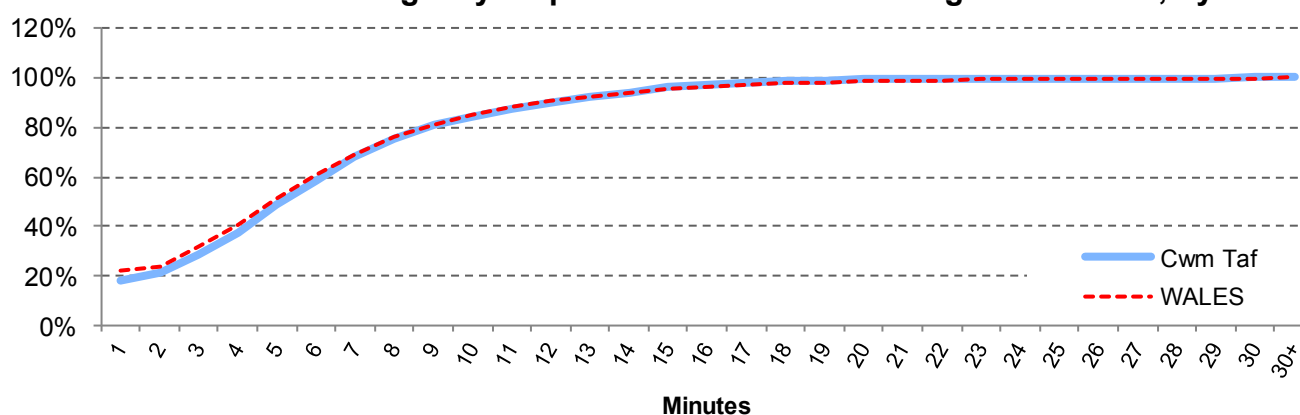


Chart 13e: Median response time – red calls

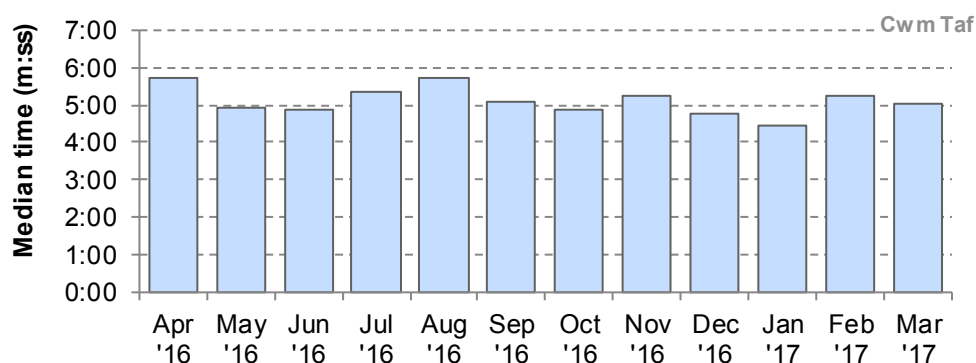
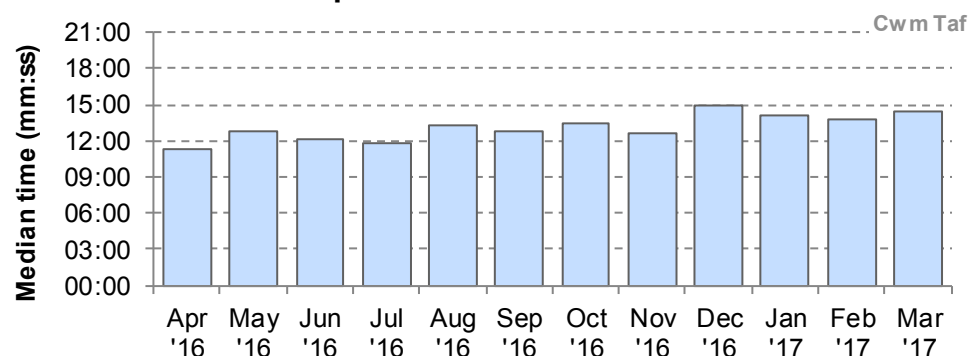
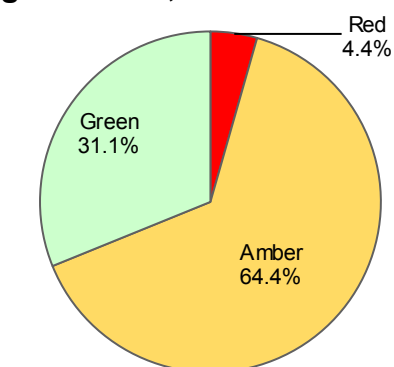


Chart 14e: Median response time – amber calls



LOCAL HEALTH BOARD PROFILE – ANEURIN BEVAN

Chart 10f: Red, amber and green calls, 2016-17



Aneurin Bevan

Chart 11f: Percentage of emergency responses at the scene within 8 minutes

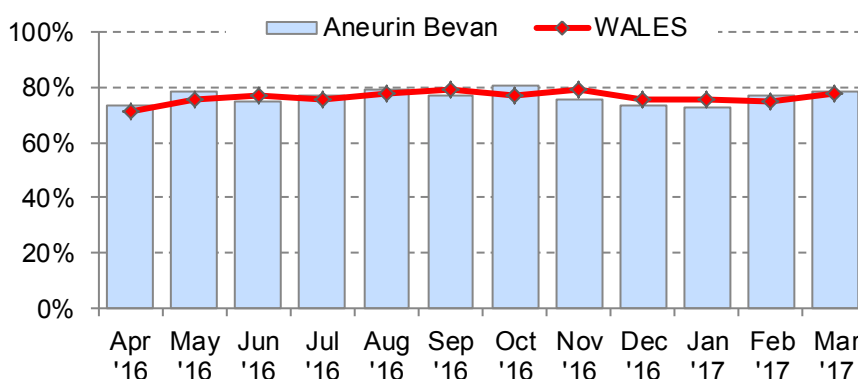


Chart 12f: Percent of emergency responses to red calls arriving at the scene, by minute

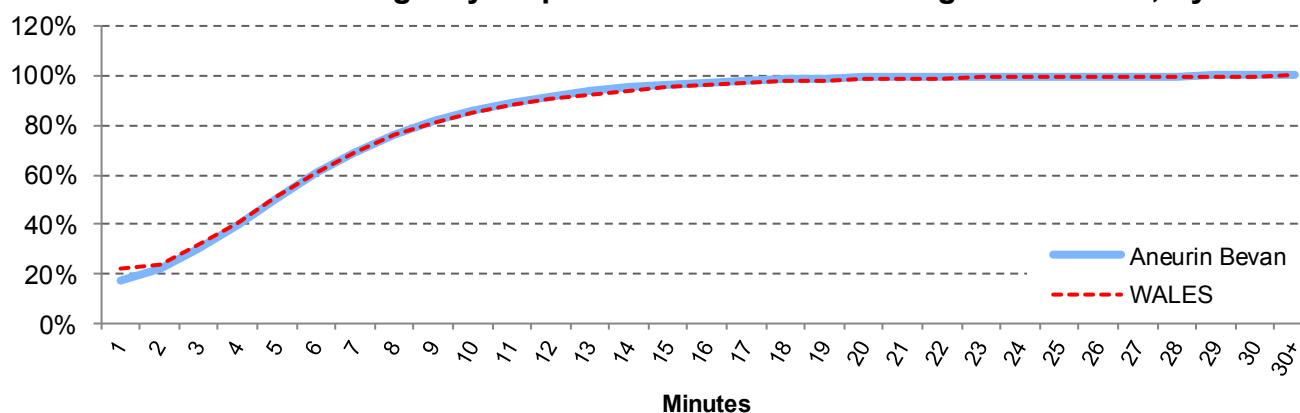


Chart 13f: Median response time – red calls

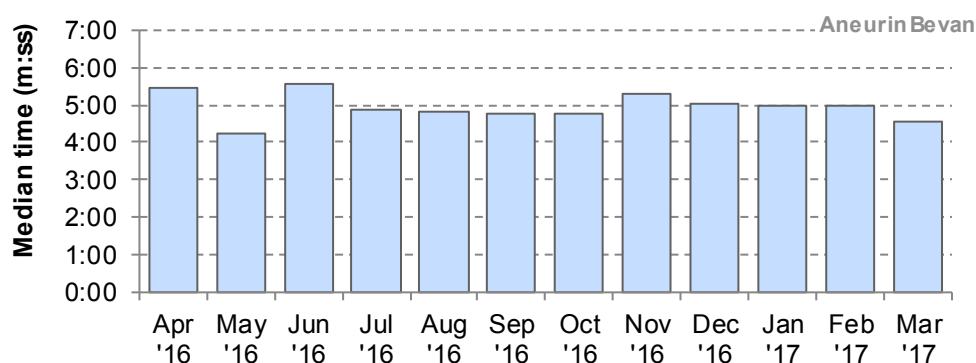
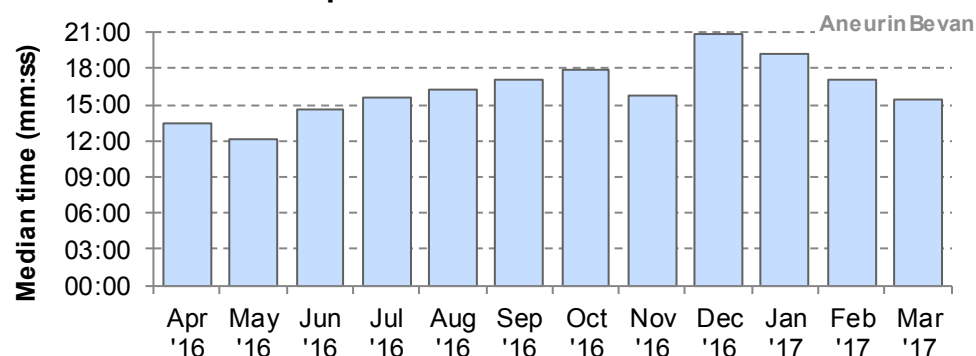
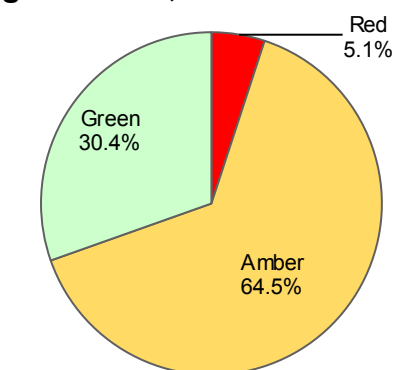


Chart 14f: Median response time – amber calls



LOCAL HEALTH BOARD PROFILE – CARDIFF & VALE

Chart 10g: Red, amber and green calls, 2016-17



Cardiff & Vale

Chart 11g: Percentage of emergency responses at the scene within 8 minutes

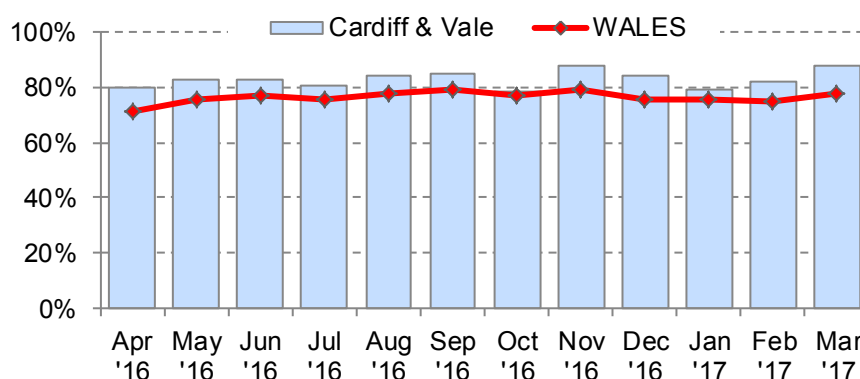


Chart 12g: Percent of emergency responses to red calls arriving at the scene, by minute

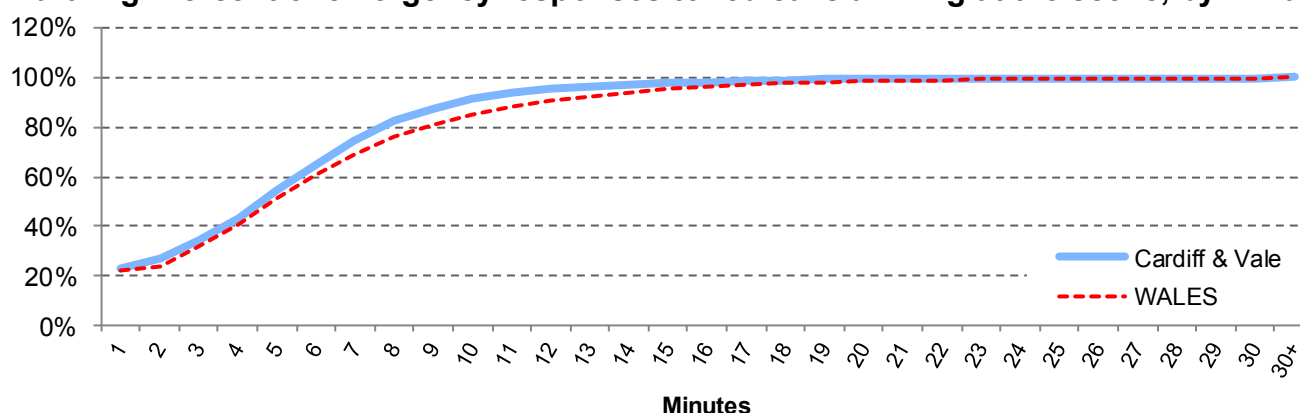


Chart 13g: Median response time – red calls

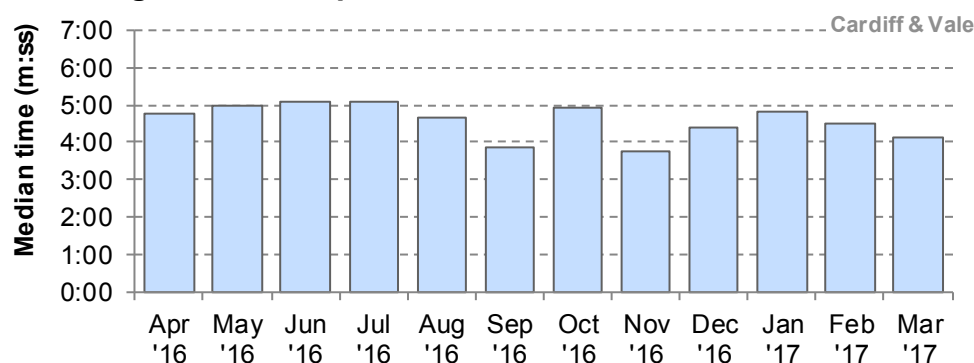
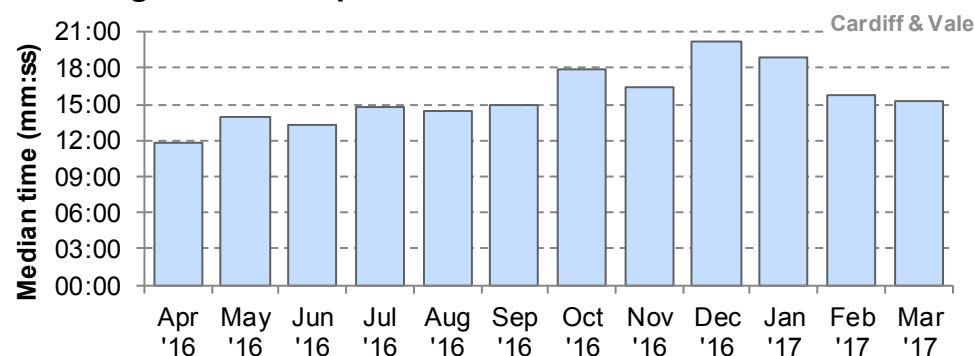


Chart 14g: Median response time – amber calls



Changes to the Ambulance Service from 1 October 2015

As announced in a [statement by the Deputy Minister for Health](#), a new clinical response model was implemented in Wales from 1 October 2015. The trial, initially scheduled for 12 months, was extended for a further 6 months, but, following receipt of the independent evaluation report commissioned by the Emergency Ambulance Services Committee (EASC), the clinical response model was implemented (February 2017).

This official statistics release covers call volumes for red, amber and green categories, response times against the red target, and median response times for both red and amber calls. Data is shown for Wales and at Local Health Board level. There is no time target for amber or green calls. Supporting information for amber responses is available on StatsWales, provides consistency (as far as possible) with the suite of information that was available under the previous model.

From 27 January 2016, more detailed, contextual information on red, amber and green calls is being published quarterly by the Emergency Ambulance Services Committee (EASC). EASC has developed a Quality and Delivery Framework for Emergency Ambulance Services and a five-step ambulance patient care pathway. It includes a range of Ambulance Quality Indicators (AQIs), targets and measures for each of the five steps – how it helps people to choose the right service for their needs; how their call is dealt with; how a response is provided; how treatment is delivered; and – if appropriate – how people are taken to hospital.

There are three existing WAST clinical indicators which are published on the My Local Health and Social Care website.

Call categories and comparability with previous data

The new model has three new categories of calls – Red, Amber and Green:

Red: Immediately life-threatening (someone is in imminent danger of death, such as a cardiac arrest). There is an all-Wales target for 65% of these calls to have a response within 8 minutes.

Amber: Serious, but not immediately life-threatening (patients who will often need treatment to be delivered on the scene, and may then need to be taken to hospital). There will be no time-based target for amber calls; instead a range of clinical outcome indicators will be introduced to measure the quality, safety and timeliness of care being delivered alongside patient experience information, which will be published every quarter.

Green: Non urgent (can often be managed by other health services and clinical telephone assessment). There is no official time based target for these calls.

Running calls (operational crews who arrive at the scene of an unrecorded incident without prior receipt of an emergency call) are counted as red calls, as are calls answered by either a Health Care Professional on Scene with a Defibrillator (MEDIC), or a Public Access Defibrillator (PAD).

Health Care Professionals¹ (HCP) Urgent & Planned Calls are identified as green; where an HCP call poses an immediate threat to life, these calls will be prioritised according to the final Medical Priority

Dispatch System priority.

¹ Doctor, General Practitioner, Emergency Care Practitioner, Nurse, District Nurse, Midwife, Paramedic, Dentist, Approved Social Worker.

As a result of these changes, nearly all of the data from the trial is not comparable to that for before October 2015. Some of the differences include:

- Call categories A & C have been removed and replaced by colour coding.
- Call handlers are allowed up to an additional two minutes to accurately identify both the severity and nature of a patient's condition (for those calls that are not immediately life threatening), and the clinical resource they require before dispatching an ambulance.
- A small proportion of calls that were classed as red 2 calls have been moved to the red category and a proportion of calls have been re-categorised from red 1. This means that comparisons cannot be made between performance against the old red1/2 categories and the current red category.
- The changes will result in a reduction in the number of calls received with a time target.
- An 8 minute response time target is only applied to red calls and therefore comparisons of the 8 minute target performance cannot be made before and after 1 October 2015 – but see also the following section on 'Changes during the trial'

The total number of calls received prior to 1 October 2015 can still be compared with total calls under the current model. This is done by adding in the GP urgent calls - which were classed as urgent not emergency - prior to December 2011.

Therefore only overall call volumes can be compared over time, whilst all other measures during the trial period can only be compared within the trial model.

Changes during the trial

Following the first month of the trial, the Chief Ambulance Services Commissioner approved revised technical guidance with WAST. This guidance ensures that incidents, (where following a 999 call the patient deteriorates), are more accurately captured (and the call is upgraded to a red category). This reflects the requirement for WAST to urgently dispatch the most appropriate response to patients with the greatest clinical need.

These changes were implemented from 11 November 2015. Calls which were originally coded as amber or green, and the patient subsequently deteriorated, are re-coded through Professional Question & Answering or by the use of a manual dispatch code/override to red. For these calls, the clock start is registered as the time the call is re-coded to red. This change is consistent with the clinical response model and reflects the immediacy of response required for the patient.

Calls which were originally coded as red and during the initial call taking process the patient's condition improves are then re-coded through Professional Question & Answering or by the use of a manual dispatch code/override to amber or green depending on condition. For these calls, the clock start is re-registered as the time the call is re-coded to amber or green.

The overall impact of this meant that – from 11 to 30 November 2015 - an additional 37 calls arrived at the scene within the 8 minute target time, increasing the percentage arriving within the target time by 2.2 percentage points.

This means that performance data for December 2015 onwards cannot be compared with October and November 2015.

Comparability with other countries

England, Scotland, Wales and Northern Ireland publish statistics relating to ambulance performance. Whilst there are similar concepts in the four countries in terms of measuring ambulance response times from the call start to arrival at the scene, and the categorisation of calls, there are distinct differences in the individual rules around measuring these times and how calls are categorised, meaning that direct comparisons are not possible. Example of those differences include (this is not a complete list):

Categorisation of calls

- England, Scotland and Northern Ireland categorise calls as Category A, category B (Scotland and Northern Ireland only) or Category C. Wales categorises calls as Red, Amber and Green.
- In Wales running calls (these are incidents where paramedics/crews come across patients before they have dialled 999, e.g. a road traffic collision/a patient who has suffered a cardiac arrest in the street) are categorised as Red, whilst in England they are categorised as Red 2.

Emergency response clock start definitions

- England - Red 1 is when the call starts. Red 2 is the earliest of: chief complaint information is obtained; chief complaint (or Pathways initial DX code) information is obtained; first vehicle assigned; 60 seconds after Call Connect.
- Wales - When the chief complaint has been established.
- Scotland - When the chief complaint is established
- Northern Ireland - When these have been ascertained: caller's telephone number, exact location of incident, and the nature of the chief complaint

This is particularly important and means that users should bear these differences in mind if making comparisons.

England

[NHS England website: Ambulance Quality Indicators](#)

Scotland

[Scottish Ambulance Service website: Annual Report](#)

Northern Ireland

[Department of Health website: Emergency care and ambulance statistics](#)

Quality report

We publish a detailed [quality report](#) on ambulance services statistics. The quality report includes information on definitions and coverage, and details of our users.

National Statistics status

The [United Kingdom Statistics Authority](#) has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the [Code of Practice for Official Statistics](#).

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the UK Statistics Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is Welsh Government's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Well-being of Future Generations Act

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators ("national indicators") that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016.

Information on indicators and associated technical information - [How do you measure a nation's progress? - National Indicators](#)

Further information on the [Well-being of Future Generations \(Wales\) Act 2015](#)

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

Further details

This release is available at: <http://gov.wales/statistics-and-research/ambulance-services/?lang=en>

Next update

The next annual release is planned for summer 2018.

In addition, from April 2017 we started to publish all of our monthly NHS activity statistics on a single day each month. All of the existing data - including ambulance data – is updated monthly through StatsWales, and an overarching commentary is published. To allow you to explore the data better and to see it in one place, an online tool is also available. More information is available in [Chief Statistician's update](#).

We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided by email to stats.healthinfo@wales.gsi.gov.uk

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